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This book presents a comprehensive theory of bilingual grammar that dispenses with the notion of two lexicons, common in most work on bilingual speakers. Luis López puts forth an integrated model, in which there is a unified system of linguistic competence. The main idea of this model, which focuses on code-switching by deep bilinguals, that is, bilingual speakers who have learned their two languages from birth or very early on, is that the linguistic competence of bilingual speakers should be considered a single cognitive module. To this end, the bilingual lexicon is viewed in the realization mode that characterizes distributed morphology, and several compelling arguments against the separationist view are discussed. The book strikes a fine balance between empirical coverage and theoretical discussion and contributes greatly to our understanding and modeling of bilingual grammars.

The book contains ten chapters and two appendices. In Ch. 1, L motivates the unified model. The main goal here is to present arguments against mainstream approaches to code-switching and bilingualism in general, which adopt the view that speakers have two discrete languages at their disposal—the perspective labeled ‘separationist’ by L. If one adopts the separationist view, one might expect the combination of a speaker’s two languages to give random results. From the point of view of the integrated model, the linguistic knowledge of a speaker is rule-governed in toto (9). This behavior is reflected in grammaticality judgment experiments, which previous literature has advised against running with bilingual speakers.

L continues his review of separationist architectures in Ch. 2. The focus of this chapter is MacSwan’s model (MacSwan 1999, 2000), which L considers, rightly in my view, to be the most formally rigorous model of the separationist perspective. The issue with MacSwan’s model, which assumes two lexicons, is that it leads to numerous empirical problems. MacSwan adopts the minimalist perspective on grammar and assumes that bilinguals have two lexicons and two PFs (phonetic forms), but one computational system. Since items from both lexicons feed the computational system, this gives rise to code-switching. L notes two empirical problems for this model. First, a common strategy adopted in code-switching is the inclusion of structures containing a light verb, typically ‘do’, that takes as its complement a verb in its citation form, which is the element that carries lexical meaning. The light verb and the lexical verb come from different lexicons. In the case of Spanish-German bilinguals, while the Spanish monolingual grammar has two uses for the verb hacer ‘do’, a causative use and the heavy use, bilingual speakers have a third use—it can function as a light verb, but one that can select only a German infinitival verb. As L argues, if there are two independent lexicons, this restriction cannot be formulated. The second case involves English-Swahili code-switching, in which English nouns bear Swahili noun class markers. The question raised is where the information about class comes from in the English lexicon. L argues that this supports the view that bilingual speakers can use nouns in two different morphosyntactic frames; see Alexiadou et al. 2015 and Alexiadou & Lohndal 2018 for further such examples. The chapter also briefly discusses Tom Roeper’s multiple grammar theory, which assumes that speakers have subgrammars which accommodate rules that may appear con-
tradictory. While this approach aims to explain apparent optionality, L’s model is motivated by
the idea that I-languages form continua and are not split into separate grammars.

Ch. 3 introduces basics of minimalism and distributed morphology (MDM). MDM assumes a Y-model of grammar. Structure is formed via the application of Merge, both external and
internal. There is also the operation Agree, which establishes dependencies between constituents.
L introduces the basic syntactic structures for the nominal and verbal clause, which include a root
as the basic unit. Roots become verbs or nouns in a particular morphosyntactic environment, that
is, in the presence of an n or a v. An important part of the model is the discussion of phases, which
are shown to play a crucial role in how sentence structuring works. In the verbal domain, C and
Voice are phase heads. Voice determines the OV/VO order within the verb phrase, while C deter-
mines the relative order of T and Voice. For example, in the case of Spanish-English bilinguals, T
is not head-final, as C comes from Spanish, and the word order within the verb phrase is VO, as
Voice comes from Spanish. In the nominal domain, L argues that K is a phase head. KP hosts case
morphology, and it seems to determine the structure of the DP in at least three varieties of code-
switching. In the case of Turkish-German code-switching, for example, German nouns appear
with Turkish case markers, and as a result concord within the DP disappears, following the Turk-
ish pattern, although both the noun and the adjectives that modify it come from German. L as-
sumes, as in distributed morphology, that there are two lists available in the lexicon. List 1
contains roots and grammatical features. Following Harley (2014), L takes roots to be abstract in-
dices. List 2 contains the vocabulary insertion rules (VIRs), which relate exponents to roots
and features. Finally, there is the ‘encyclopedia’, also known as list 3, which lists the meanings of
words. L provides four sources of language differentiation:

(i) List 1: There could be linguistic variation with respect to the features or feature bun-
dles, even if drawn from a universal set of functional categories.
(ii) Before list 2: Operations such as local dislocation and impoverishment are language-
specific.
(iii) List 2: VIRs differ across languages.
(iv) After list 2: Languages vary with respect to word order, stress rules, and the structure
of prosodic phrases. In addition, readjustment rules are language-specific.

Ch. 4 illustrates the one-lexicon view in MDM. Let us consider the case of English-Swahili
mixing. L assumes that English n, Swahili n, and the roots of the two languages all belong to the
same list 1. The cases of code-switching mentioned earlier, where an English root appears with a
Swahili noun class marker, are the result of one root being selected by two different kinds of n.
This is actually a pattern that has also been identified in other work; see for instance Alexiadou et
al. 2015 for other bilingual varieties. The assumption that there is only one list 1 and only one list
2 leads to several possible domains of competition. L discusses three such domains: (i) roots, (ii)
free functional items, and (iii) inflectional functional items. The one-lexicon model allows for the
possibility that two list 2 items may spell out the same root. With respect to functional items, the
typical case is that vocabulary items have distinct bundles of features; thus no competition may
arise. However, it is possible for terminals from both languages to have the same feature bundles
and for the vocabulary items to have exactly the same structure. This, L argues, is very rare.

L moves on to discuss some applications of his model in the three domains. An example of com-
petition of roots involves gender transfer. Gender transfer is a phenomenon where a word borrowed
from one language into another is assigned the gender of the noun it replaced. For example, the
word beer imported into French and Italian became feminine, la bierre and la birra, respectively,
because the Latin noun it replaced, cervisia, was feminine. If gender were a feature inherent to the
noun, it would be mysterious how gender transfer could happen. However, in MDM, as in the cases
discussed in Alexiadou et al. 2015, gender assignment emerges from the syntactic structure, and a
new spell-out can be adopted for an old root. L discusses several scenarios regarding free functional
morphemes. One case involves free variation of functional morphemes, as found in code-switching
between Sranantongo and Nengee, two Creole languages. A case where the feature bundles asso-
ciated with syntactic terminals are distinct is illustrated with negation: Spanish-Basque bilinguals
do not have free variation between the negation markers of Spanish and Basque, *no* and *ez*, respectively. This is because, as L argues, the two are associated with distinct features. Finally, L turns to a discussion of the replacement of the Old English third-person plural pronouns by Scandinavian forms, which he argues involved true competition that led to the disappearance of one set of forms. Turning to bound functional items, the question is if, for example, bilingual Spanish-English speakers have both *switching* and *switchear* in their grammars, shouldn’t the one be more specified and thus prevent the realization of the other? The answer here is ‘no’, as the inflectional morphemes have different environments of exponence and thus will never be in competition. L points out that it is difficult for inflectional exponents to replace each other. In Spanish-Quechua bilingual grammar, for example, there are plural morphemes from both Spanish and Quechua, but the Spanish morphemes did not replace the Quechua ones: rather, the two sets of morphemes redistributed across the nominal domain, receiving specialized uses.

In his discussion of dependencies, including agreement, binding, and *wh*-dependencies, L points out that in the MDM model, at the point at which these dependencies are determined, the probes and goals are bundles of features and do not belong to a language. The chapter further discusses other contact phenomena, namely borrowing, loan translation, and syntactic transfer. In the case of the first phenomenon, the main issue is the relationship between code-switching and borrowing. While for several researchers these are distinct processes, this assumption is not necessary within the MDM model. Loan translation, defined as literal translation in language A of one or more elements in a semantically equivalent way in language B (70), is captured within the MDM model by assuming a further vocabulary item related to a particular root. Finally, with respect to syntactic transfer, the MDM model offers an analysis of various patterns in which we basically have the addition of new exponents for roots that already exist in the lexicon of speakers.

In Ch. 5 L turns to an in-depth analysis of gender, discussing four case studies that support the MDM one-lexicon model. The point of departure for his discussion is the assumption that gender is a feature on *n* (Kramer 2015, among others), and that every root that combines with an *n* bearing gender features will receive gender specification. The first case is Spanish-Basque code-switching. Basque is a language that lacks gender, while Spanish nouns are classified as feminine or masculine. The question then is what happens when a Basque noun is inserted into a Spanish frame: what gender will it have, and what kind of concord will it trigger? It is reported that bilingual speakers choose the masculine gender, which is the Spanish default, with the exception of nouns ending in *-a*, where the feminine determiner is chosen. L analyzes *-a* as an exponent of *n* when *n* attaches to a particular set of roots. The second case is English-Spanish code-switching, where there is some disagreement as to whether an English determiner can appear with a Spanish noun. In L’s own experiment, such sequences were acceptable if pronounced with Spanish phonetics. The ungrammaticality of strings such as *the mesa* with English phonetics is unexplained within the two-lexicons model, as one could assume that *mesa* is borrowed into English and thus would be completely fine with an English determiner. To explain this phenomenon, L assumes that the categorizer determines which externalization will be chosen. Since *-a* is a Spanish exponent of *n*, the determiner will be pronounced as if it were a Spanish exponent, as the two are within the same phonological word.

Two further cases are discussed: gender in Nahuatl-Spanish code-switching and gender in Spanish-German code-switching. In the case of Nahuatl-Spanish DPs, it has been reported that code-switches are acceptable when the determiner is Nahuatl and the noun Spanish, but not the other way around. Determiners in Nahuatl do not inflect. L explains the unavailability of combinations of Spanish determiners with Nahuatl nouns as failures of gender assignment. The Spanish-German data are quite intricate. German determiners with Spanish nouns are allowed for some combinations, but not others, while German nouns can freely combine with Spanish determiners. German feminine nouns take the Spanish feminine determiner, while masculine and neuter nouns take the nonfeminine one. When the determiner is German, case morphology becomes important. With definite determiners in nominative or accusative, the feminine German determiner can occur with a feminine Spanish noun, but masculine Spanish nouns cannot cooccur with a German definite article in nominative or accusative case. If the German determiner is da-
tive, it is grammatical with a Spanish noun of either gender. With indefinite determiners, code-switching is possible in the nominative case, and in the accusative case it is allowed as long as the neuter determiner is used. Code-switching is always possible with an indefinite feminine determiner or a plural determiner and a Spanish noun. In the genitive, code-switching is not possible at all. All of these patterns are explained by L by the feature bundles the various vocabulary items realize, whereby genitive is viewed as a dissociated morpheme.

In Ch. 6 L discusses the idea that within the MDM model there is only one PF. In this chapter, L provides arguments that operations such as clitic cluster simplification point to the integration of impoverishment rules, mutation, and even prosody and linearization. To explain the puzzle of why the phonology in code-switching is homogenous within words, L appeals to Embick’s (2010) proposal that the categorizer is a phase head, and these heads determine the PF side of the grammar; see also Alexiadou & Lohndal 2018.

In Chs. 7–10, the focus of the discussion is on findings in the psycholinguistic literature and how these can be explained within the MDM model. In Ch. 7 L asks what we learn when we learn a word. L assumes that the items in list 3, the ’encyclopedia’, minimally include a root and a categorizing morpheme. From the perspective of the MDM model, sometimes learning a new word implies learning a new exponent. In other cases, it may involve a new concept, a new morphosyntactic structure for an old concept, or extending the range of environments where the index may be used. The first option seems to be the easiest one. Moreover, the acquisition of L2 vocabulary is not fundamentally different from that of L1 vocabulary. The chapter includes some discussion of psycholinguistic models of the bilingual lexicon, arguing that the distinct-models approach to L1 and L2 vocabulary learning is not necessary.

In Ch. 9 L turns to a discussion of other work on code-switching and code-blending, which adopts a distributed morphology perspective or an integrated linguistic perspective. L discusses points of convergence and divergence. For the works L selected, a criticism that surfaces is that they do not present a coherent theory, but, as he notes, the study of code-switching and bilingual grammar from a particular theoretical perspective is still in its infancy. It is not clear to me whether this criticism applies to Alexiadou & Lohndal 2018, which shares a lot of common features with L’s model, but also diverges in some respects. This is not surprising, as that study and L’s work partly looked at similar empirical data.

In Ch. 10 L summarizes the main points of the book and addresses the translanguaging project. Finally, Appendix A discusses restrictions on code-switching, and Appendix B looks at the post-Creole continuum and sketches how the MDM model can handle it.

The book presents a coherent model of how code-switching can be analyzed using the machinery of the minimalist program combined with that of distributed morphology. Moreover, it shows how theoretical modeling can be informed and enriched by code-switching data. It is very insightful and makes a clear case against the view that bilingual speakers have two separate lexicons. It is very hard to find points to criticize in this monograph, as I share several of the author’s assumptions and insights. In fact, it seems to me that a model such as distributed morphology is best suited to analyze code-switching (Alexiadou 2011) for the reasons also given in L’s book. It is interesting that in a lot of work cited by L and also in my own work the focus is on gender: such data support the analysis of gender as a feature on n (Kramer 2015 and others). As L states, in code-switching, every root that combines with an n that bears gender features will receive gender specification; thus gender is not a feature on roots, nor can it be an inherent feature of nouns in
separationist models. Importantly, these studies show that nouns are built by combining roots and functional structure. Moreover, in our joint work, López et al. 2017, we looked at how phases can be used to predict switches, but also at how code-switching can inform phase theory.

This book is extremely well written and a real pleasure to read. It is ingenious without being too technical and offers a robust empirical basis. Most importantly, it presents an inventory of tools that can be used in work on code-switching, thus making an extremely valuable contribution to our field. It is an incredible achievement, and I am really enthusiastic about this work and grateful that such an explicit model has been presented. What I find particularly attractive about the integrated model is that, since it makes a compelling case against separation, it treats large parts of crosslinguistic variation as realization in nature. The task then is to identify which categories are universal, and the question is whether we should expect crosslinguistic variation within list 1. With respect to this issue, the text might lead one to suspect that some parts of the functional spine are more prone to variation than others. Perhaps the locus of variation is not in the inventory, but rather in the bundling of features, as L suggests. The remarks on the post-Creole continuum are very insightful and offer yet another domain where the model can analyze the patterns and has predictive power.

Naturally, even such a wonderful contribution raises certain questions. For instance, one might wonder why L focuses on what he calls deep bilinguals. It is clear why this selection was made: arguably such speakers form a coherent speech community when it comes to grammaticality judgments, and L makes use of this method of investigation. As he correctly points out, other literature has documented differences between deep bilinguals and other types of bilinguals. Thus, the question arises of whether the MDM model can be used for such speakers too. I am sure it can be, once we focus on what different types of bilingual speakers can do. Alexiadou & Lohndal 2018, by contrast, does not discriminate between different types of bilingual speakers. The idea then could be that all types of bilingual speakers have a unified lexicon, and to the extent that differences are observed between deep bilinguals, L2 speakers, and heritage speakers, these could be attributed to other factors, some of which L briefly mentions (8). It would be a worthwhile enterprise to disentangle these factors. I offer some thoughts on heritage speakers in closing.

How can the MDM model deal with heritage speakers? Rothman (2007), Alexiadou (2017), Polinsky (2018), and Wiese et al. (2021), just to mention a few authors, argue that heritage speakers show effects of register leveling: that is, certain structures are not available to them, as they belong to a formal register, acquired via formal education. This naturally relates to the interesting debate in syntactic theory of how to capture register variation. An attractive idea would be, following Adger (2014), to limit the variation within MDM’s list 2: that is, to assume that we have cases of generalized exponence. But as discussed in Lohndal & Putnam 2021, at least two other options suggest themselves: for instance, we could have a reorganization of morphosyntactic structure, modeled along the lines of historical change mentioned in L’s book. Or the inventory of features may change, another option discussed by L. This just shows that the model L proposes can and should have a wider application. If heritage grammars instantiate patterns of language change, can we construct predictive models of language change (Polinsky & Scontras 2019)? I believe that the MDM model provides the right ingredients to think about how to approach language change, as it offers very specific ideas about the locus of variation. Polinsky and Scontras (2019) identify three possible outcomes: avoidance of ambiguity, resistance to irregularity, and shrinking of structure. Arguably, all of these seem to be related to variation either within and after list 1 (shrinking of structure) or within and after list 2.

REFERENCES


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Some academic books read like a culmination of decades of research, while other books make new and fresh proposals. This volume by Diane Massam fulfills both of these roles simultaneously. On the empirical side, we see the sum total of a life’s work in documenting the morphosyntax of an endangered language. Yet at the same time, the analyses are novel, often radical departures from M’s prior work in this domain. The primary themes of this volume involve the representation of arguments, the derivation of predicate-initial syntax, and the relationship between verbal and nominal syntax.

This volume is part of a series of books on endangered languages, with the focus here being the analysis of Niuean, an endangered Polynesian language with speaker communities living primarily in Niue and New Zealand. While the books in this series are not intended to be grammars, M offers the reader a comprehensive view of Niuean morphosyntax. The data are clearly presented, representing both corpus and elicited data, and reflect a long-standing research interest in the language. Each chapter includes detailed descriptions of language properties, including extensive data sets on tense-mood-aspect markers, voice particles, arguments, predicate types, the fine-grained structure of nominals, and many others. While the presentation of the data ultimately serves the analysis, this book will be an invaluable resource for morphosyntactic data on Niuean and a rich source of data for theorizing about the key properties of Niuean grammar, including isolating morphology, verb- or predicate-initial word order, and ergative/absolutive alignment.